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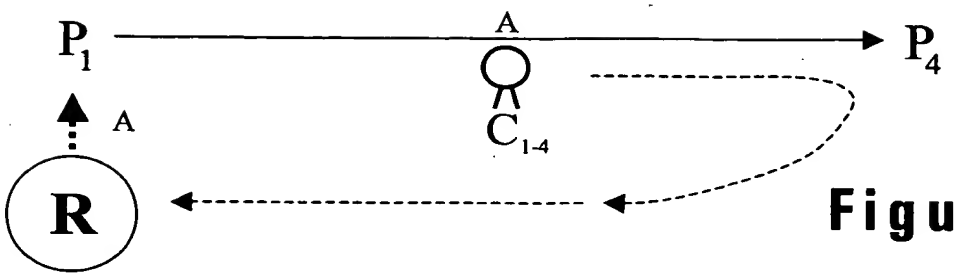


Figure 1

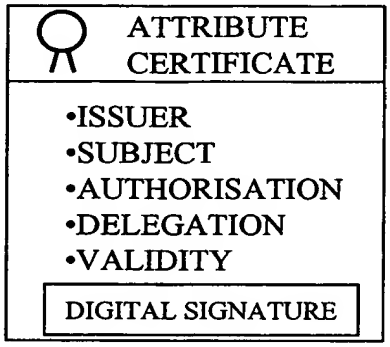
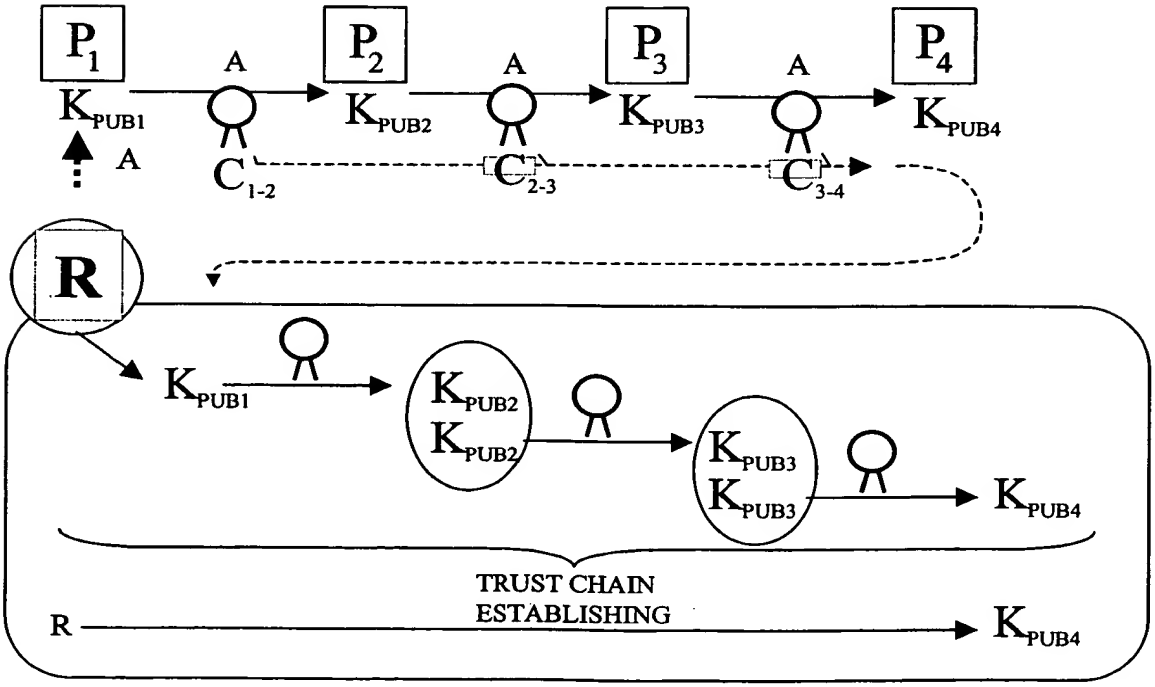


Figure 2

Figure 3



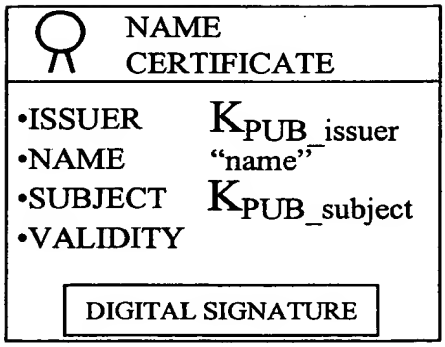


Figure 4

$$K_{PUB\_issuer} \bullet \text{"name"} = K_{PUB\_subject}$$

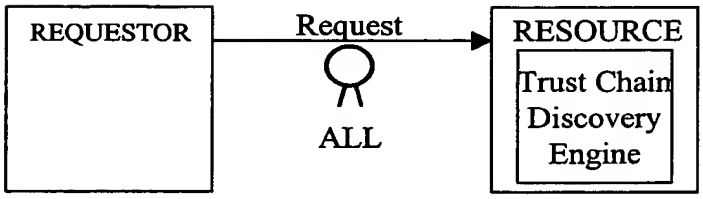


Figure 10

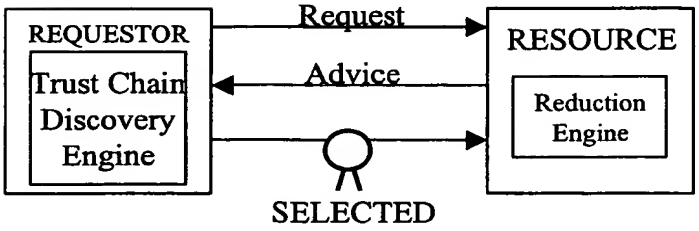
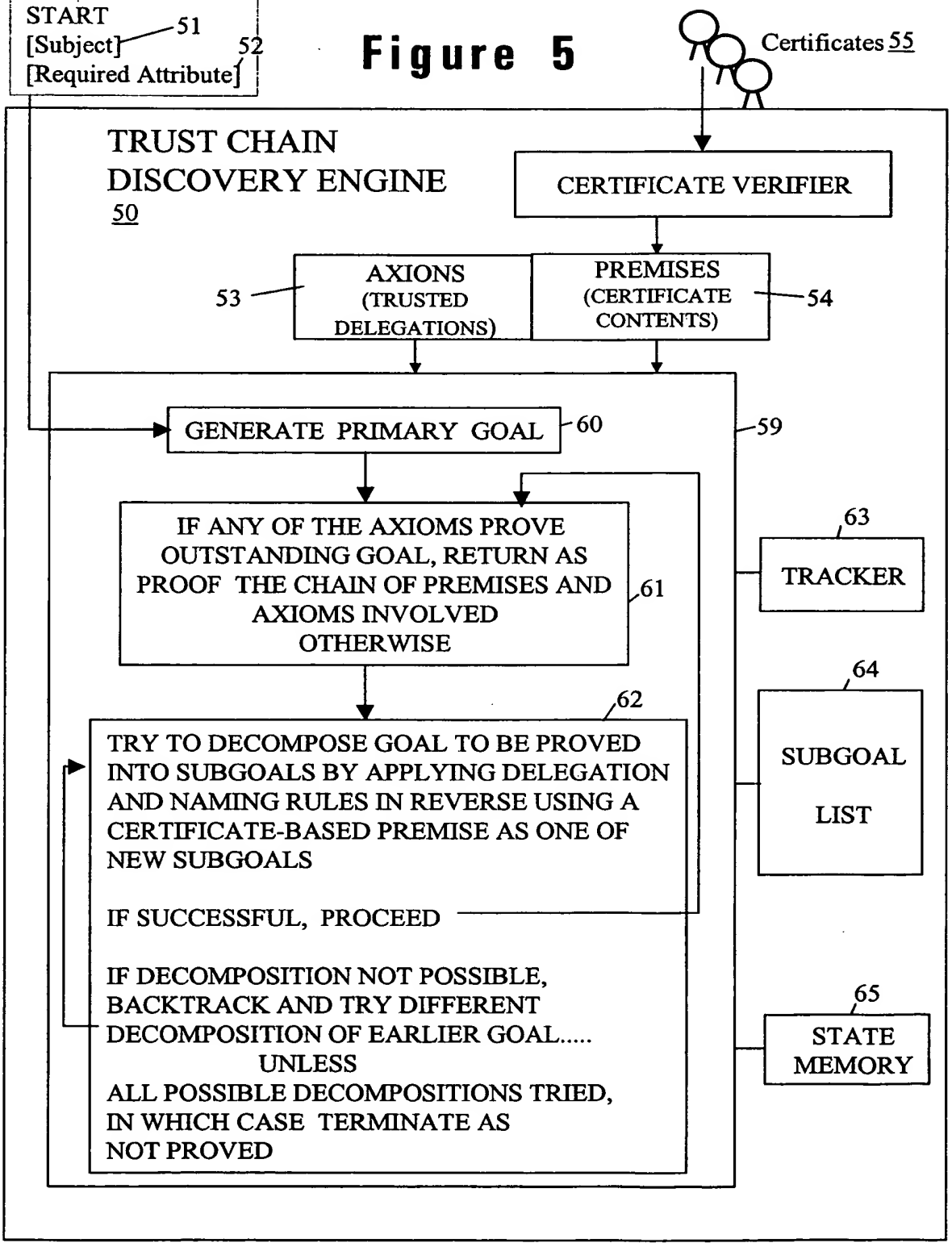


Figure 11

Figure 5


START
[Subject] 51
[Required Attribute] 52
Certificates 55
TRUST CHAIN DISCOVERY ENGINE 50
CERTIFICATE VERIFIER
53
AXIONS (TRUSTED DELEGATIONS)
PREMISES (CERTIFICATE CONTENTS)
54
GENERATE PRIMARY GOAL
60
59
IF ANY OF THE AXIOMS PROVE OUTSTANDING GOAL, RETURN AS PROOF THE CHAIN OF PREMISES AND AXIOMS INVOLVED
OTHERWISE
61
63
TRACKER
64
SUBGOAL LIST
62
TRY TO DECOMPOSE GOAL TO BE PROVED INTO SUBGOALS BY APPLYING DELEGATION AND NAMING RULES IN REVERSE USING A CERTIFICATE-BASED PREMISE AS ONE OF NEW SUBGOALS
IF SUCCESSFUL, PROCEED
IF DECOMPOSITION NOT POSSIBLE, BACKTRACK AND TRY DIFFERENT DECOMPOSITION OF EARLIER GOAL.....
UNLESS
ALL POSSIBLE DECOMPOSITIONS TRIED, IN WHICH CASE TERMINATE AS NOT PROVED
65
STATE MEMORY

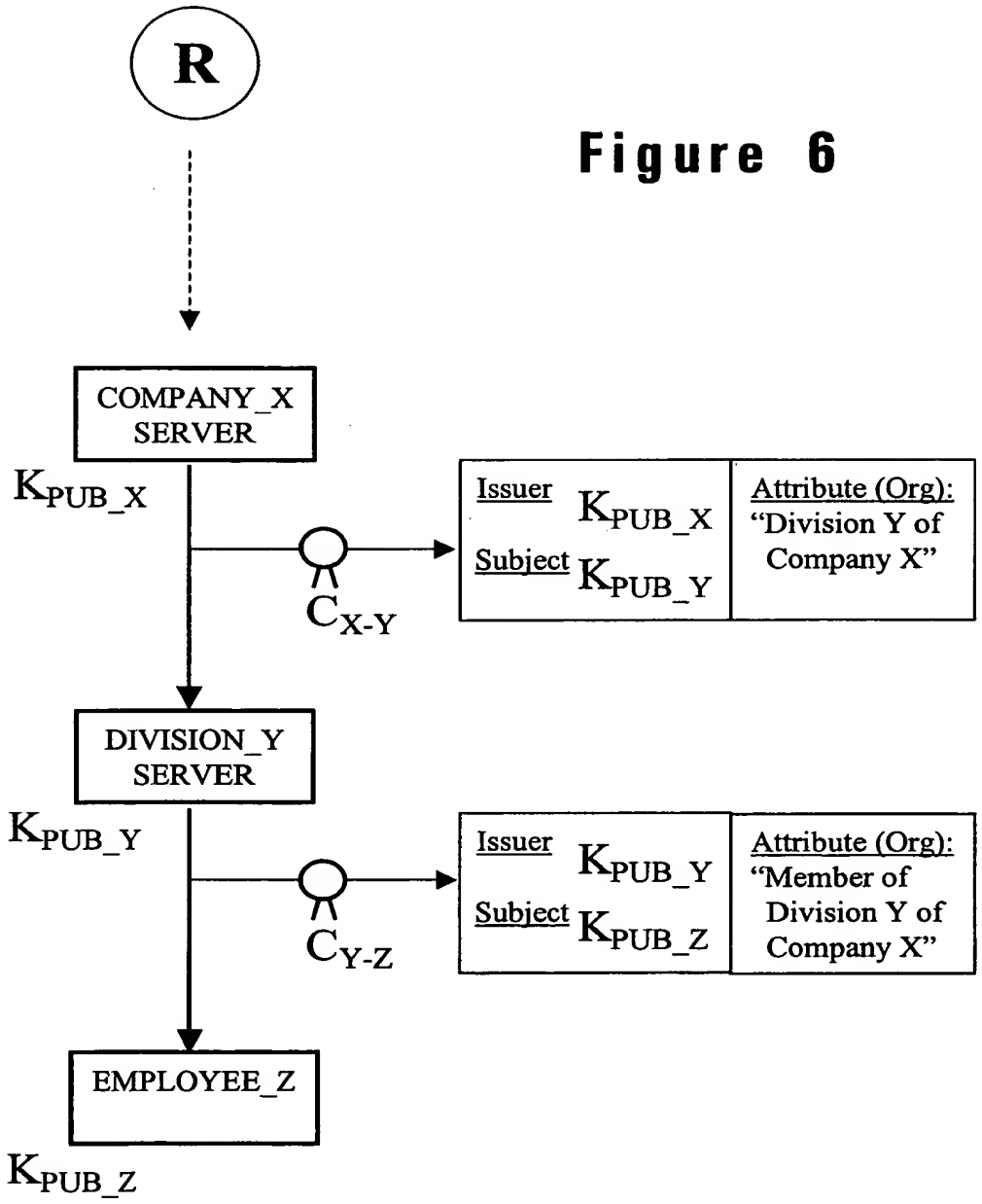

R
COMPANY_X SERVER
K_{PUB_X}
C_{X-Y}
Issuer K_{PUB_X}
Subject K_{PUB_Y}
Attribute (Org): "Division Y of Company X"
DIVISION_Y SERVER
K_{PUB_Y}
C_{Y-Z}
Issuer K_{PUB_Y}
Subject K_{PUB_Z}
Attribute (Org): "Member of Division Y of Company X"
EMPLOYEE_Z
K_{PUB_Z}

Figure 6

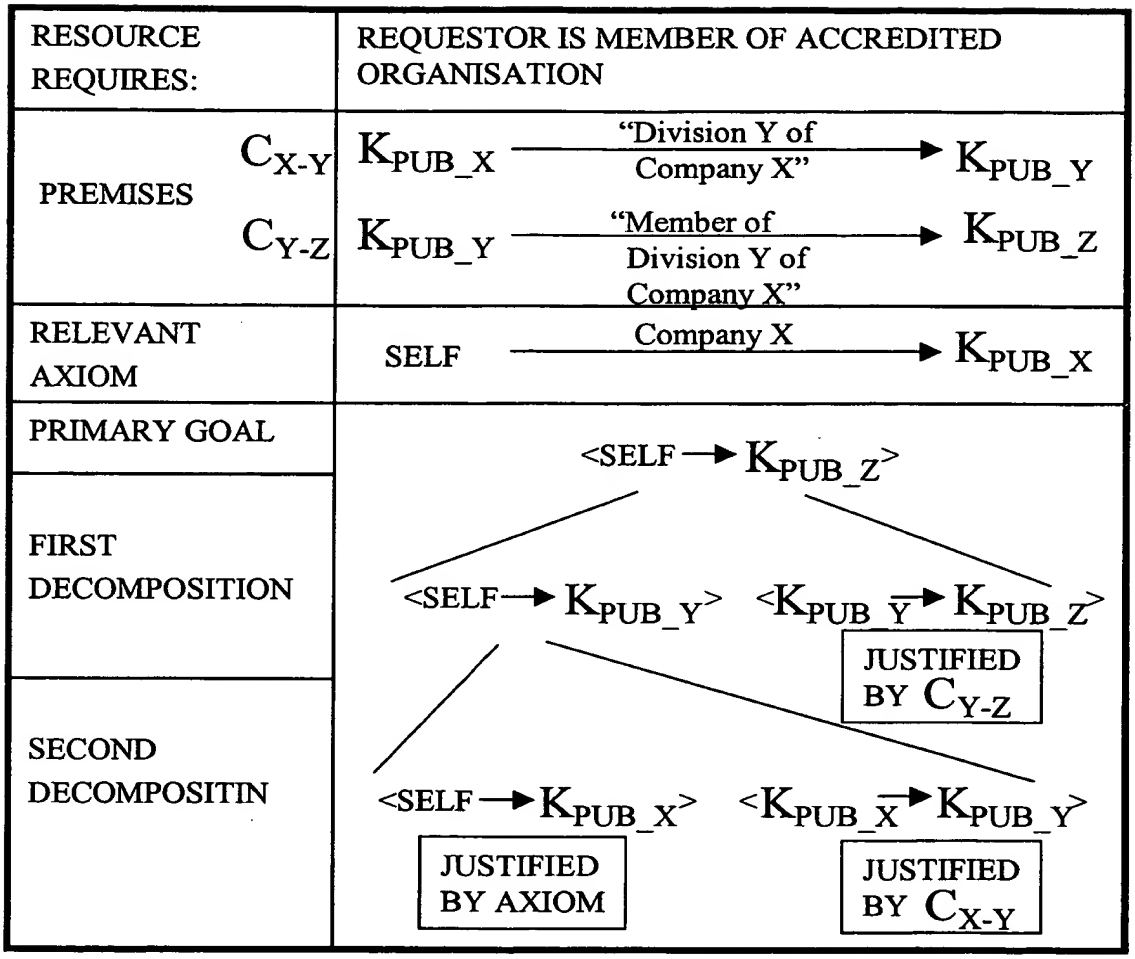

RESOURCE REQUIRES:
REQUESTOR IS MEMBER OF ACCREDITED ORGANISATION
PREMISES
C_{X-Y}
C_{Y-Z}
K_{PUB_X} "Division Y of Company X" K_{PUB_Y}
K_{PUB_Y} "Member of Division Y of Company X" K_{PUB_Z}
RELEVANT AXIOM
SELF Company X K_{PUB_X}
PRIMARY GOAL
<SELF → K_{PUB_Z}>
FIRST DECOMPOSITION
<SELF → K_{PUB_Y}>
<K_{PUB_Y} → K_{PUB_Z}>
JUSTIFIED BY C_{Y-Z}
SECOND DECOMPOSITIN
<SELF → K_{PUB_X}>
<K_{PUB_X} → K_{PUB_Y}>
JUSTIFIED BY AXIOM
JUSTIFIED BY C_{X-Y}

Figure 7

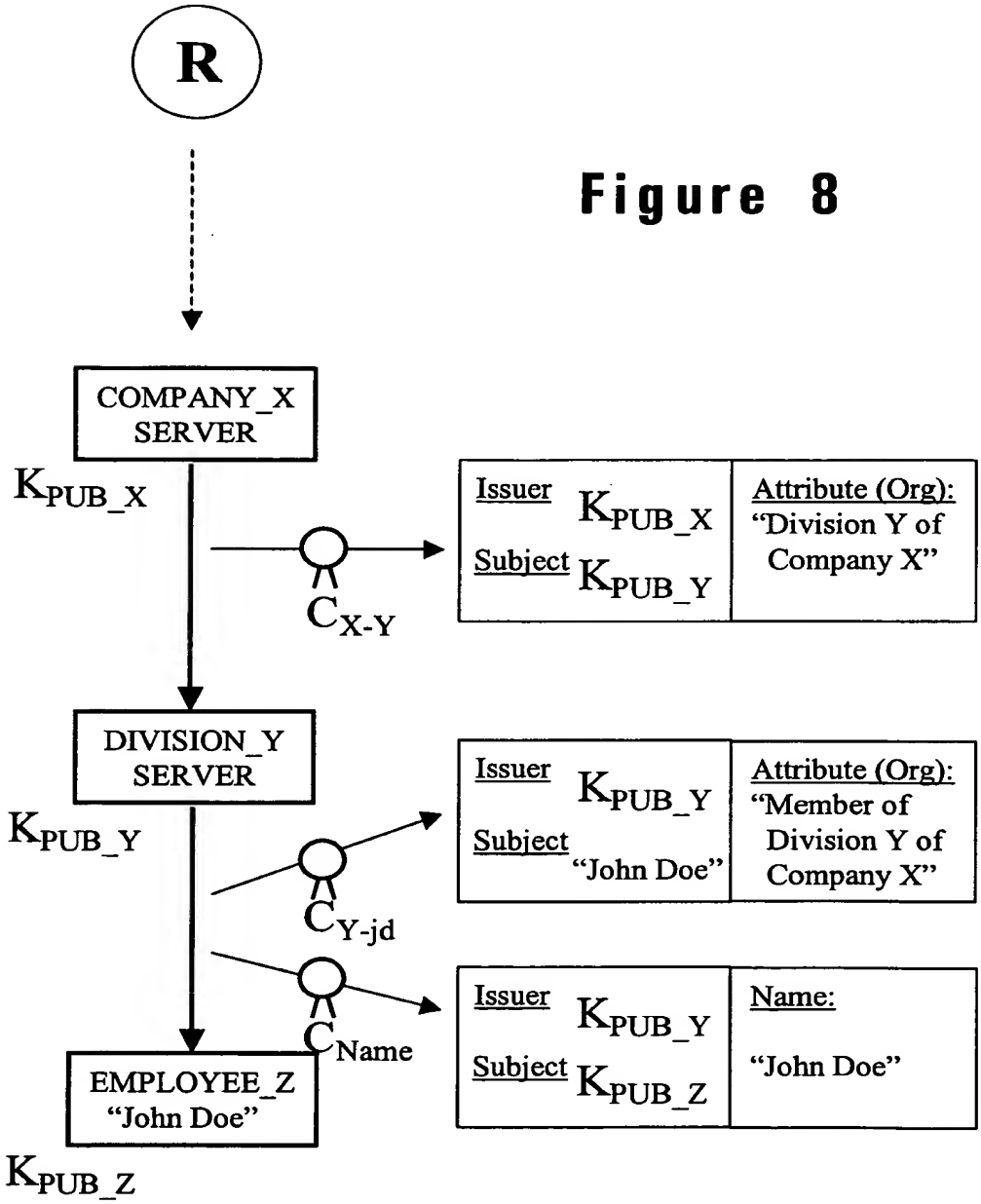

R
COMPANY_X SERVER
K_{PUB_X}
C_{X-Y}
Issuer K_{PUB_X}
Subject K_{PUB_Y}
Attribute (Org): "Division Y of Company X"
DIVISION_Y SERVER
K_{PUB_Y}
C_{Y-jd}
Issuer K_{PUB_Y}
Subject "John Doe"
Attribute (Org): "Member of Division Y of Company X"
C_{Name}
Issuer K_{PUB_Y}
Subject K_{PUB_Z}
Name: "John Doe"
EMPLOYEE_Z "John Doe"
K_{PUB_Z}

Figure 8

RESOURCE REQUIRES:	REQUESTOR IS MEMBER OF ACCREDITED ORGANISATION
PREMISES C_{X-Y}	$K_{PUB\_X} \xrightarrow{\text{"Division Y of Company X"}} K_{PUB\_Y}$
C_{Y-jd}	$K_{PUB\_Y} \xrightarrow{\text{"Member of Division Y of Company X"}} \text{"John Doe"}$
C_{Name}	$K_{PUB\_Y} \bullet [\text{"John Doe"}] = K_{PUB\_Z}$
RELEVANT AXIOM	SELF $\xrightarrow{\text{Company X}} K_{PUB\_X}$
PRIMARY GOAL	$<\text{SELF} \rightarrow K_{PUB\_Z}>$
FIRST DECOMPOSITION	$<\text{SELF} \rightarrow \text{"John Doe"} >< \text{"John Doe"} \rightarrow K_{PUB\_Z}>$ JUSTIFIED BY C_{Name}
SECOND DECOMPOSITION	$<\text{SELF} \rightarrow K_{PUB\_Y}>$ $<K_{PUB\_Y} \rightarrow \text{"John Doe"}>$ JUSTIFIED BY C_{Y-jd}
THIRD DECOMPOSITION	$<\text{SELF} \rightarrow K_{PUB\_X}>$ JUSTIFIED BY AXIOM; $<K_{PUB\_X} \rightarrow K_{PUB\_Y}>$ JUSTIFIED BY C_{X-Y}

Figure 9

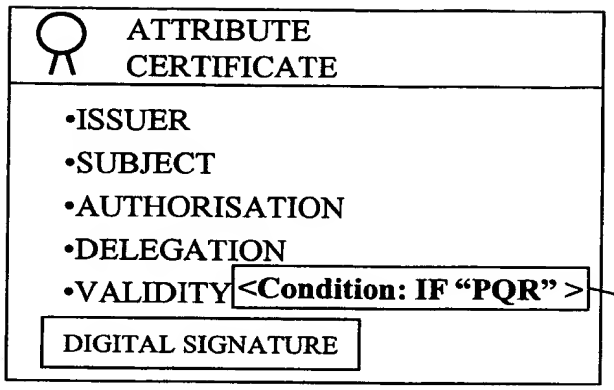


Figure 12

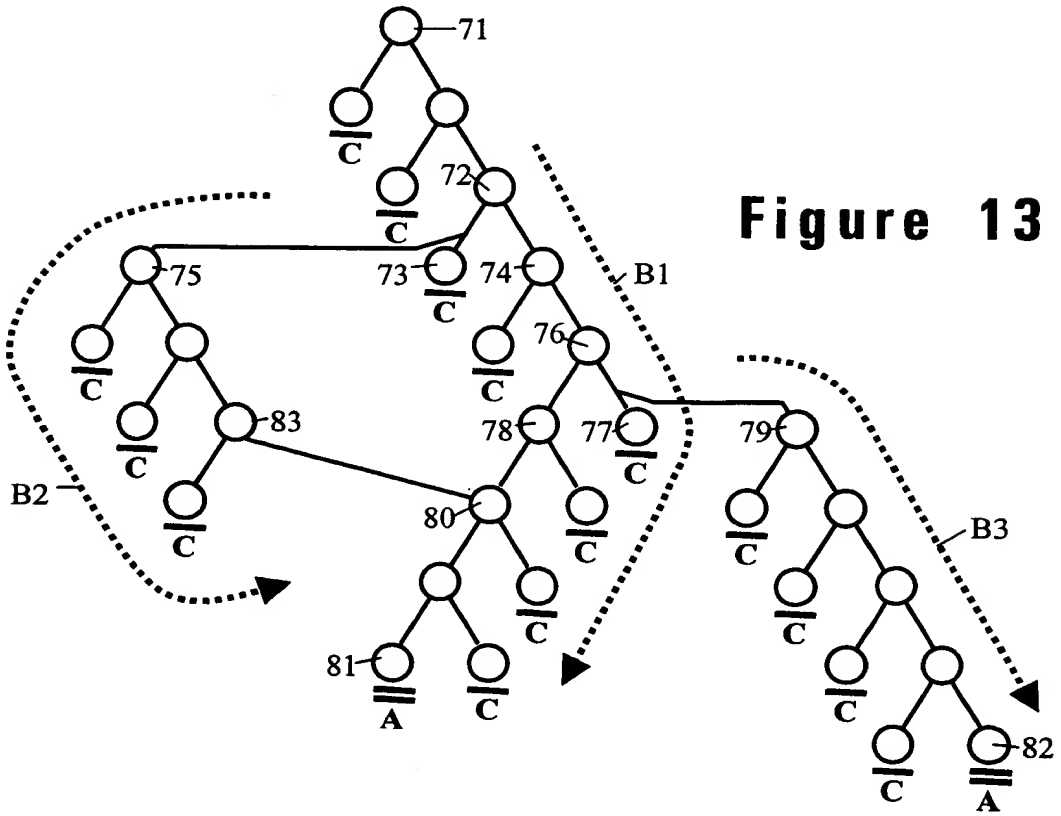


Figure 13